

Explanation of Amendments in the Claims:

1.(currently amended) A method of providing illumination in a greenhouse, the greenhouse comprising:

an exterior wall structure having an end wall and first and second two side walls at right angles to the end wall, each of which includes primarily transparent panels allowing entry to an interior of natural light;

a plurality of elongate parallel benches located side by side within the interior at right angles to the end wall and arranged to provide generally horizontal support surfaces for supporting plant materials thereon for receiving the natural light and growing within the interior;

and a lighting system for supplying artificial light to the plant materials on the support surfaces comprising:

a plurality of lighting fixtures;

a plurality of rails arranged in parallel spaced positions in a common horizontal plane at a height above the benches with the rails of the plurality of rails extending parallel to the benches and with the rails of the plurality of rails including at least one intermediate rail and a first and a second side rail of the plurality of rails where the first side rail is located adjacent the first side wall and the second side rail is located adjacent the second side wall two-side-rails each adjacent a respective one of the side walls;

each rail supporting a plurality of the plurality of lighting fixtures in a row along the rail;

each of the plurality of lighting fixtures comprising:

a mounting member for attachment to the respective rail;
a generally parabolic reflector carried on the mounting member so as to be depended facing generally downwardly toward the plant material for directing light toward the plant material;

the generally parabolic reflector having a cross-section which is substantially constant along a parabolic axis thereof;

a lighting bulb support for receiving and supporting a bulb at a position within the generally parabolic reflector such that light therefrom is reflected by the generally parabolic reflector;

providing for the parabolic reflector a center line of the parabolic reflector generally parallel to and spaced from the parabolic axis thereof so as to define a lighting direction of light from the bulb reflected by the parabolic reflector;

~~wherein the mounting member of each of the plurality of lighting fixtures is pivotal relative to the generally parabolic reflector having a center line of the generally parabolic reflector about an axis generally parallel to a generally parallel to and spaced from the parabolic axis of the generally parabolic reflector so as to define and to the lighting bulb support so as to adjust the angle of the light directed in a lighting direction of light from the bulb reflected by the generally parabolic reflector relative to the rail;~~

the method comprising:

providing a fixed pattern of illumination from wherein the plurality of the lighting fixtures mounted on said at least one intermediate rail by locating has the lighting fixtures thereof in fixed position adjusted such that the center line of the

parabolic reflector is directly above the parabolic axis so that the lighting direction thereof is maintained at a fixed direction angled vertically downwardly;

providing a fixed pattern of illumination from and wherein the plurality of the lighting fixtures mounted on said first each of the two side rail by locating rails has the lighting fixtures thereof in fixed position thereon such that the center line of the parabolic reflector is located upwardly and outwardly of the parabolic axis toward the first side wall adjusted such that the lighting direction thereof is maintained at a fixed direction angled downwardly and inwardly away from the first respective side wall;

and providing a fixed pattern of illumination from the lighting fixtures mounted on said second side rail by locating the lighting fixtures thereof in fixed position thereon such that the center line of the parabolic reflector is located upwardly and outwardly of the parabolic axis toward the second side wall so that the lighting direction is maintained at a fixed direction angled downwardly and inwardly away from the second side.

2.(currently amended) The method of providing illumination in a greenhouse according to Claim 1 A greenhouse comprising:

an exterior wall structure having an end wall and two side walls at right angles to the end wall, each of which includes primarily transparent panels allowing entry to an interior of natural light;

a plurality of elongate parallel benches located side by side within the interior at right angles to the end wall and arranged to provide generally horizontal support surfaces for supporting plant materials thereon for receiving the natural light and growing within the interior;

and a lighting system for supplying artificial light to the plant materials on the support surfaces comprising:

a plurality of lighting fixtures;

a plurality of rails arranged in parallel spaced positions in a common horizontal plane at a height above the benches with the rails of the plurality of rails extending parallel to the benches and with the rails of the plurality of rails including two side rails each adjacent a respective one of the side walls;

each rail supporting a plurality of the plurality of lighting fixtures in a row along the rail;

each of the plurality of lighting fixtures comprising:

a mounting member for attachment to the respective rail;

a generally parabolic reflector carried on the mounting member so as to be depended facing generally downwardly toward the plant material for directing light toward the plant material;

the generally parabolic reflector having a cross section which is substantially constant along a parabolic axis thereof;

a lighting bulb support for receiving and supporting a bulb at a position within the generally parabolic reflector such that light therefrom is reflected by the generally parabolic reflector;

wherein the mounting member of each of the plurality of lighting fixtures is pivotal relative to the generally parabolic reflector about an axis generally parallel to a parabolic axis of the generally parabolic reflector and to the lighting bulb support so as to adjust the angle of the light directed in a lighting direction relative to the rail;

~~and wherein the plurality of the lighting fixtures mounted on each of the two side rails has the lighting fixtures thereof adjusted such that the lighting direction thereof is angled downwardly and inwardly away from the respective side wall;~~

including moving wherein the lighting bulb support is movable relative to the generally parabolic reflector so as to move the bulb within an axial plane of the generally parabolic reflector so as to move the bulb relative to the parabolic axis.

3.(currently amended) The method of providing illumination in a greenhouse according to Claim 2 including providing for wherein the generally parabolic reflector has end walls at right angles to the axial plane and moving the lighting bulb support is movable along the end walls.

4.(currently amended) The method of providing illumination in a greenhouse according to Claim 2 Including providing on the generally parabolic reflector has a recessed notch in the generally parabolic reflector at the axial plane.

5.(cancelled)

6.(cancelled)

7.(cancelled)

8.(currently amended) The method of providing illumination in a greenhouse according to Claim 1 7 wherein the rails are interconnected to form an array connected and are suspended from the beams for common height adjustment of the array.

9.(currently amended) The method of providing illumination in a greenhouse according to Claim 8 including moving wherein the rail height is adjustable to provide an adjustable spacing from top of crop material so that the height can be

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~~adjusted to provide a constant predetermined spacing from the crop as the crop material grows and wherein the reflectors of the array are designed to maximize light intensity at the predetermined spacing.~~

10 (cancelled)